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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,248	09/23/2005	Barbara Ballsieper	18841	1941

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EXAMINER	
JOHNSTON, PHILLIP A	

ART UNIT	PAPER NUMBER
2881	

MAIL DATE	DELIVERY MODE
09/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,248	BALLSIEPER, BARBARA	
	Examiner	Art Unit	
	Phillip A. Johnston	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 September 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9-23-2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-21are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of USPN 7,041,995.

3. Claims 1-4, and 12-14 of the instant application are obvious equivalents to the recitations of claims 1-5 of USPN 7,041,995. For example, claims 1-4 of the instant application and patented claims 1-3 both teach a lead substitute material for radiation protection purposes in the energy range of an X-ray tube with a voltage of 60 125 kV, wherein for nominal lead equivalent values of 0.25 to 2.00 mm comprising;

a matrix material (such as silicone), between 12 and 22% by weight,

Sn, or Sn compounds between 1 and 75% by weight,

Bi, or Bi compounds between 1and 80% by weight,

W, or W compounds, between 0 and 73%.

4. Claims 15-18 of the instant application are obvious equivalents of patented claims 4 and 5. For example, both include a structure of protective layers of different

compositions, wherein the layers are separate or joined together, wherein the protective layer(s) more remote from the body comprise(s) predominantly the elements having a lower atomic number, or their compounds, and the protective layer(s) close to the body comprise(s) predominantly the elements having a higher atomic number, or their compounds.

Claims Rejection – 35 U.S.C. 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-14,20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,548,570 to Lange, in view of Lagace , USPN 6,153,666.

7. Regarding claim 1, Lange teaches a lead substitute material for radiation protection purposes in the energy range of an X-ray tube having a voltage of from 60 to 140 kV, the lead substitute material comprises from 12 to 22 wt. % of a silicone-based material, from 1 to 75 wt. % Sn or Sn compounds, from 0 to 73 wt. % W or W compounds, from 0 to 80 wt. % Bi or Bi compounds. See Examples 1 through 3, at Col. 3, line 1-15; Col. 5, line 20-67; and Col. 6, line 1-10.

8. Lange fails to teach a lead substitute material having a nominal overall lead equivalent of from 0.25 to 2.00 mm.

9. Lagace teaches a tin filled elastomeric shielding material having a lead equivalence of 0.487 when tested at 90 and 100 kV. See Col. 4, line 40-61.

10. Lagace modifies Lange to provide a polymer matrix mixed with a radiation attenuating composition that produces the same attenuation effectiveness as 100% lead that is significantly lighter in weight.

11. Therefore it would have been obvious to one of ordinary skill in the art that, Lange would use the composition of Lagace, to provide a metal loaded polymeric sheet material suitable for the preparation of protective garments for the protection of workers or subjects exposed to x-radiation.

12. Regarding claims 2-4, the ranges of wt % for each component of the lead substitute material recited therein, are included in the range of wt % disclosed by the combination of Lange and Lagace above, regarding claim 1.

13. Regarding claims 5-11, Lange teaches a lead substitute material containing radiation absorbing compounds selected from the group consisting of antimony, barium, bismuth, bromine, cadmium, cerium, cesium, gold, iodine, indium, iridium, lead, mercury, molybdenum, osminium, platinum, polonium, rhenium, rhodium, silver, strontium, tantalum, thorium, tin, tungsten, uranium, zirconium, elements from the lanthanide group and elements from the actinide group. See Col. 3, line 16-43.

14. Regarding claims 12 and 13, Lange as described above regarding claim 1, teaches the use of silicone rubber (VMO and MQ), as well as silicone resin powder, which includes the recitations of claim 12 and 13.

15. Regarding claim 20, Lange teaches particle sizes in the range of between 20 μm and 120 μm (See Col. 3, line 16-27), which includes the percentile values for D_{50} when the Sn content is varied from 30% to 70% for a layer thickness of 0.5mm.

16. Regarding claim 21, Lange teaches shielding materials are elastic substances that are mixed with elements with high atomic numbers or compounds thereof that can be processed into protective clothing. Col. 1, line 9-18.

17. Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,548,570 to Lange, in view of Lagace, USPN 6,153,666, and in further view of Cadwalader, USPN 6,674,087.

18. Regarding claims 15-19, the combination of Lange and Lagace fails to teach the use of plural protective layers where the layers more remote from the body contain lower atomic number compounds than the layers closer to the body.

19. Cadwalader teaches the use of plural layers as shown below in Figure 3, where two high z attenuation layers 322d and 322e are sandwiched between two low z skin and cover layers 346 and 348. See Col. 4, line 15-67.

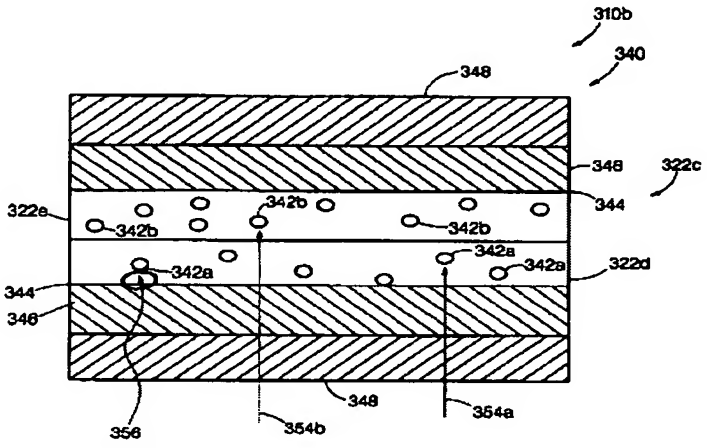

FIGURE 3

The examiner has determined from Figure 3 that at least two of the layers further from the body will always be low z materials, thus relative to those at least two further away at least two of the closer layers would contain the high z materials.

20. Cadwalader modifies Lange and Lagace to provide a plural layered shield where multiple layers can be selected to contain high z or low z materials depending on the application.

21. Therefore, it would have been obvious to one of ordinary skill that Lange and Lagace would use the multilayered system of Cadwalader to provide a radiation attenuation system that is relatively flexible and compliant, and which provides a relatively high degree of comfort to the user.

Conclusion

22. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (571) 272-2475. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor Robert Kim can be reached at (571)272-2293. The fax phone number for the organization where the application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJ

August 28, 2007

ROBERT KIM
SUPERVISORY PATENT EXAMINER